

# DOE Composite Panel on High Performance Computing

Paul Avery  
University of Florida  
<http://www.phys.ufl.edu/~avery/>  
[avery@phys.ufl.edu](mailto:avery@phys.ufl.edu)

HEPAP Meeting  
Latham Hotel, Georgetown  
Jan. 28, 2002

# Background to Panel

## ✍ DOE Office of Science (OSc)

- ✍ HPC “primarily” in Office of Advanced Scientific Computing Research
- ✍ But HPC efforts in support of research exist throughout OSc
- ✍ OSc recognizes strategic importance of HPC to scientific discovery
- ✍ E.g., recent SciDAC awards in 2001

## ✍ Existing advisory committee: ASCAC







- ✍ (Advanced Scientific Computing Advisory Committee )
- ✍ One of 6 Office of Science advisory committees

## ✍ Creation of new panel to address HPC (Fall, 2001)



- ✍ From Director, Office of Science
- ✍ “... assess the high-performance computational needs and capabilities throughout the Office of Science ...”
- ✍ Report due September, 2002

# Composite Panel

## Panel membership (Chair: Greg McRae, MIT)

-  ASCAC members
-  DOE/NSF High Energy Physics Advisory Panel (HEPAP)
-  DOE/NSF Nuclear Science Advisory Committee (NSAC)
-  Basic Energy Sciences Advisory Committee
-  Fusion Energy Sciences Advisory Committee
-  Biological and Environmental Research Advisory Committee

## Meetings

-  Most business to be conducted by e-mail, phone meetings
-  Still being organized, no meetings yet

# Overview of Charge




The panel should carry out a broad assessment of the status and the prospects for high performance computing with respect to all five SC programs [...] The panel will provide recommendations and advice to the Director, Office of Science on high performance computing needs, management issues, and funding requirements. The panel may exercise wide latitude while conducting this study. [...]

# Charge Details

## What exists now

-  Overall quality of HPC/networking facilities
-  Comparison with other facilities (national & international)

## Impact and effectiveness of current programs

-  Interactions & resource sharing among HPC/networking facilities
-  Current distribution of HPC/networking resources
-  Level and adequacy of funding

## Evolution of facilities & distribution over 3-5 years

-  To meet HPC needs of OSc
-  To maintain OSc scientific leadership

## Metrics

-  Gulp...

# NSF Panel on US Cyberinfrastructure

- ✍ "Blue-ribbon" advisory panel formed by NSF
  - ✍ Chair: Dan Atkins, U of Michigan
- ✍ Charge (my limited understanding of it)
  - ✍ Evaluate effectiveness of existing computing infrastructure in meeting scientific & engineering needs
  - ✍ Recommend new areas of emphasis
  - ✍ Recommend implementation plan
- ✍ Several "testimony" meetings
  - ✍ Computer scientists
  - ✍ Scientists using HPC in research
  - ✍ Nov. 2001
  - ✍ Jan. 2002
  - ✍ Later in 2002
- ✍ Report due later in 2002 (?)